

**WE CLAIM:**

- 1           1.     A network analyzer, comprising:  
2                 a memory accessible to said network analyzer storing information associating  
3     transmit frequencies and receive frequencies;  
4                 receiver means receiving at least one operating one of said transmit  
5     frequencies;  
6                 a source generating a source signal including one or more of said receive  
7     frequencies; and  
8                 a processor operatively connected to said memory, said receiver means and  
9     said source, said processor receiving said at least one operating transmit frequency, accessing  
10    said memory to determine at least one operating one of said receive frequencies associated  
11    with said at least one operating transmit frequency and instructing said source to avoid  
12    inclusion of said at least one operating receive frequency within said source signal.
  
- 1           2.     The network analyzer of Claim 1, wherein said source further generates an  
2     additional source signal including said at least one operating receive frequency.

1           3.     The network analyzer of Claim 2, further comprising:  
2                 an additional memory storing at least one avoided frequency corresponding to  
3     said at least one operating receive frequency.

1           4.     The network analyzer of Claim 3, further comprising:  
2                 means for determining said at least one transmit frequency associated with said  
3     at least one avoided frequency; and  
4                 means for determining that said at least one transmit frequency associated with  
5     said at least one avoided frequency is no longer in use.

1           5.     The network analyzer of Claim 4, wherein both said means for determining  
2     comprises at least said processor.

1           6.     The network analyzer of Claim 1, wherein said receiver means further receives  
2     said source signal and at least one reflected signal resulting from transmission of said source  
3     signal.

1           7.     The network analyzer of Claim 6, further comprising:

2                     measurement logic operatively connected to said processor and said receiver  
3     means, said measurement logic measuring data based on said source signal and said reflected  
4     signal.

1           8.     The network analyzer of Claim 7, wherein said source generates an additional  
2     source signal including said transmit frequencies other than said at least one operating transmit  
3     frequency, and said receiver means receives said additional source signal and an additional  
4     reflected signal resulting from transmission of said additional source signal, said measurement  
5     logic measuring said data based on said at least one operating transmit frequency, said  
6     additional source signal and said additional reflected signal.

1           9.     The network analyzer of Claim 6, further comprising:

2                     a transmitter connected to said source, said transmitter transmitting said source  
3     signal.

1           10.    A method for measuring data associated with an antenna of a base station  
2    within a cellular network, comprising:  
3           providing information associating transmit frequencies and receive frequencies,  
4    said information being accessible to a network analyzer;  
5           receiving at least one operating one of said transmit frequencies at said network  
6    analyzer;  
7           determining at least one operating one of said receive frequencies associated  
8    with said at least one operating transmit frequency; and  
9           generating a source signal including one or more of said receive frequencies for  
10   injection into the antenna from said network analyzer, said source signal avoiding inclusion of  
11   said at least one operating receive frequency.

1           11.    The method of Claim 10, further comprising:  
2           generating an additional source signal including said at least one operating  
3    receive frequency for injection into the antenna from said network analyzer.

1           12.    The method of Claim 11, further comprising:  
2           storing at least one avoided frequency corresponding to said at least one  
3    operating receive frequency in an additional memory accessible to said network analyzer.

1           13.    The method of Claim 12, further comprising:  
2                   determining said at least one transmit frequency associated with said at least  
3 one avoided frequency; and  
4                   determining that said at least one transmit frequency associated with said at  
5 least one avoided frequency is no longer in use.

1           14.    The method of Claim 10, further comprising:  
2                   receiving said source signal and at least one reflected signal resulting from  
3 transmission of said source signal at said network analyzer.

1           15.    The method of Claim 14, further comprising:  
2                   measuring the data associated with the antenna based on said source signal and  
3 said reflected signal.

1           16.    The method of Claim 15, further comprising:  
2                   generating an additional source signal including said transmit frequencies other  
3 than said at least one operating transmit frequency.

1           17.    The method of Claim 16, further comprising:  
2                receiving said additional source signal and an additional reflected signal  
3    resulting from transmission of said additional source signal at said network analyzer.

1           18.    The method of Claim 17, wherein said step of measuring further comprises:  
2                measuring the data associated with the antenna based on said at least one  
3    operating transmit frequency, said additional source signal and said additional reflected signal.

1           19.    The method of Claim 15, further comprising:  
2                transmitting said source signal from said network analyzer towards the antenna.